of the horn. And, it is just this factor of speed that is notoriously the most difficult to control. To effect the necessary reforms will require the active interference and co-operation of automobile associations and municipalities. A.G.N.

PROGRESS IN MEDICINE

WE not only pride ourselves upon living in the most progressive period of the world's history, but sometimes are inclined to be boastful of this our good fortune.

Few will take exception to the claim that science in general, and medicine in particular, has made as much progress during the last fifty years as during the whole previous history of mankind. Some of our more enthusiastic members claim that the major part of medical progress has been made within the last quarter of a century. It may be that even the latter assertion is within the range of fact.

We are perhaps too much inclined to forget that active advance in medicine did not begin until within comparatively recent years. We, of course, do not imply that great credit is not due to Hippocrates and others of the old Greeks who untrammelled medicine from the traditions and superstitions of the pagan priesthood, and who made it clear that there are no supernatural causes of disease. Even after giving due credit to the old masters and to such schools as those at Alexandria and Salernum, and to the part played by Arabian physicians in the preservation of Greek teaching and the addition of a few new drugs, we are compelled to admit that medicine remained in a practically stagnant condition until Vesalius gave to the world the important facts about the anatomy of the human body. It may help our orientation by remembering that this demonstration did not take place until some time after the discovery of America, which is not a remote date in history. Nevertheless, except for the contemporaneous brilliancy of Paré in surgery, and the unique eccentricities of Paracelsus in general medicine, we can attribute little progress even to this period. Enterprising Europeans had been exchanging glass beads or equally valueless trinkets for the valuable silver and gold ornaments of the original inhabitants of this Western hemisphere for nearly half a century before Vesalius began to attract medical students to his classes at Padua, and Linacre, perhaps the greatest of medical humanists, to herald the revival of learning in England. The stimulus of Vesalius, great though it was, was not sufficient to create that spirit of investigation which alone could establish medicine on a firm foundation. Not until Harvey set forth his views on the circulation and supported them with his well-considered experiments did medicine really enter upon the path that led to progress. The discovery of the circulation was the most momentous event in the history of medicine. Harvey's methods at once excited the admiration of many, and with his work we may say the experimental method in medicine really began. This was in the year 1628.

Harvey and Malpighi proved the circulation to be a physical process, but threw no light upon the chemical processes, which even then were considered to be of very great importance. It was really not until the eighteenth century was well advanced that scientists acquired definite knowledge about oxygen, nitrogen, and carbon dioxide, and that the understanding of respiration became possible.

These discoveries in chemistry were made during the "Hunterian period," and this year marks the bicentenary of John Hunter's birth. Hunter's contributions to medicine are very generally known, and we speak of him still as one of the three greatest surgeons of all time. It is difficult, however, for us to realize that it is only a century and a half since John Hunter was recognized as a man of unusual qualities. During the span of his lifetime, nevertheless, many most notable advances were made in medicine and the allied sciences. The list of his prominent contemporaries in various fields of activity is a long one. Sir Isaac Newton died only in the year preceding John Hunter's birth. Linnæus and Boerhaave died when he was but a lad. During the active years of his life, Albrecht von Haller, Stephen Hales,

Luigi Galvani, Giovanni Morgagni and Huxham investigated the problems of physiology; Lavoisier and Priestley developed our knowledge of chemistry; and Lettsom, Smellie, Mead, Cullen, Haygarth, Cheselden and Jenner were advancing our knowledge of clinical medicine.

When we realize that these notable physicians and investigators lived within such a short period of our own era we are impressed with the fact that little advance was made in medicine during the previous ages, and that comparisons of the headway made during the past few decades can be made only with that of the past two centuries rather than with that of earlier times.

W. H. HATTIE

Editorial Comments

THE STERILIZATION OF MENTAL DEFECTIVES

At the last annual meeting of the American Medical Association an interesting commentary on the present position of sterilization in the United States was given by means of a special exhibit consisting largely of a series of maps and graphs. One of these was a map of the United States showing what legislation existed in each state. Considerable variation was evident. In some states there had been no legislative action; in others action had been taken and had then been found to be unconstitutional, while others still awaited the results of legal tests; in some the law seemed to be functioning satisfactorily; in some operative sterilization was made compulsory; in others it was voluntary. Two charts tabulated the states, showing the order in which the first sterilization statute was passed, what classes of individuals were subject to sterilization, and the agencies which had the authority to make the decision to sterilize.

One graph was devoted to the increase in population of institutions for mentally diseased since 1850, and of the mentally defective since 1904. An attempt was made in another chart to summarize the effect of sterilization of the insane and feeble-minded on race betterment, on the morality of the neighbourhood, and on the individual himself. Other maps showed the number and cost per capita of patients in hospitals for mental disease and mental defectives, and the institutions in California in which the insane or feeble-minded were sterilized. Finally, there was a list of the operations which induce sterilization, with or without unsexing.

The data for this exhibit were taken chiefly from a book entitled "Eugenical Sterilization, 1926," by Dr. H. H. Laughlin, but also included information gathered from reports of the United States Census.

The surgical aspect of the subject has been dealt with by Dr. Dickinson in a paper entitled "The surgery of the insane and feeble-minded in California." In this he commented on the necessity of emphasizing the fact that sterilization did not involve the removal of any organ or the lessening of sex feeling, and referred to the amount of theorizing on the subject which had appeared in the press, in comparison with the collection of facts on the subject. He closed his paper with proposing a resolution that the Section of Obstetrics, Gynæcology and Abdominal Surgery recommend to the American Medical Association that it organize or take part in an impartial and thorough investigation of sterilization from the point of view of medicine, surgery and preventive medicine.

The comment made on the subject by the Board of Trustees of the American Medical Association is worthy of note.* They recognize that the interest in legislation for sterilization is widespread, but the medical profession has not given the subject the study it deserves. "If legislation authorizing the asexualization of certain classes in the community does not accomplish the results that its proponents promise, the medical profession may have to assume its share of the responsibility, even though it has done nothing but stand idly by while the legislatures have acted. It seems timely to undertake a study of the field of eugenic sterilization asexualization now, so that the policy of the Association may be wisely determined."

H.E.M.

THE USE OF EPHEDRINE

Ephedrine is an alkaloid whose value in controlling attacks of hay fever or asthma is now fairly well established It is not a specific remedy for these conditions any more than the very numerous therapeutic measures which in their turn have given relief. It does however most nearly approach that remedy which of all others generally used has the most rapid and beneficial effect, although short in duration, that is, epinephrin hydrochloride given hypodermically. But ephedrine possesses the not inconsiderable advantage of being effective when given by mouth, and when it does give

* *J. Am. M. Ass.*, 1928, xc, 1462.